



# UNITED STATES PATENT AND TRADEMARK OFFICE

5x  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,790	06/29/2001	Christopher Frank Codella	YOR920010317US1	4589
21254	7590	09/13/2004	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			CHANG, JUNGWON	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/893,790	<b>Applicant(s)</b> CODELLA ET AL.	
	<b>Examiner</b> Jungwon Chang	<b>Art Unit</b> 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/22/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-35 are presented for examination.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-35 are rejected under 35 U.S.C. 102(e) as being anticipated by

Huberman et al. (US 6,115,718), hereinafter referred to as Huberman.

4. As to claims 24 and 32, Huberman discloses a method of predicting a next item in a database, to be requested by a user (i.e., indicates a probability that a user will access a document during the course of browsing the collection of linked documents; col. 2, lines 14-25; the “law of surfing” provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47; identify “relevant” documents to one currently being viewed; col. 3, lines 20-29), said method comprising:

sensing a first item requested by a user (i.e., web page currently being viewing;

Art Unit: 2154

col. 1, line 48) and

applying a likelihood function to predict a second item to be requested by the user (i.e., the “law of surfing” provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47; indicates a probability that a user will access a document during the course of browsing the collection of linked documents; col. 2, lines 14-25; identify “relevant” documents to one currently being viewed; col. 3, lines 20-29; the “Recommend” feature provides a list of related web pages that a user may want to retrieve and view based on the web page that they are currently viewing; col. 1, lines 46-48).

5. As to claim 25, Huberman discloses said sensing is performed on a server side of a computer system (i.e., system administrators; col. 4, lines 58-66).

6. As to claim 26, Huberman discloses said item comprises a Web page (i.e., a list of related web pages that a user may want to retrieve and view based on the web page that they are currently viewing; col. 1, lines 46-48; col. 3, lines 30-43).

7. As to claim 27, Huberman discloses caching said predicted second item (i.e., the “law of surfing” provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47; indicates a probability that a user will access a document during the course of

browsing the collection of linked documents; col. 2, lines 14-25; identify "relevant" documents to one currently being viewed; col. 3, lines 20-29; the "Recommend" feature provides a list of related web pages that a user may want to retrieve and view based on the web page that they are currently viewing; col. 1, lines 46-48).

8. As to claim 28, Huberman discloses displaying the predicted second item is displayed upon a user's request (col. 4, lines 7-8).

9. As to claims 29-31, Huberman discloses estimating a direction of next items to be requested based on projecting a vector in space based on at least two items having been requested previously (fig. 5; col. 4, lines 41-47; col. 5, lines 34-47).

10. As to claims 1 and 33, they are rejected for the same reasons set forth in claims 24 and 32 above. In addition, Huberman discloses predicting a subsequent document which, with a highest degree of probability, is likely to be retrieved based on the first document accessed (i.e., most relevant is an indication that it has a high likelihood to be of interest to someone viewing the document.... identify "relevant" documents to one currently being viewed; col. 3, lines 20-29; the "law of surfing" provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47; indicates a probability that a user will access a document during the course of browsing the collection of linked documents; col. 2, lines 14-25; the "Recommend" feature provides a list of related web pages that a

user may want to retrieve and view based on the web page that they are currently viewing; col. 1, lines 46-48).

11. As to claim 34, it is rejected for the same reasons set forth in claims 24 and 32 above. In addition, Huberman discloses a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus (i.e., software program for execution on a computer based system; col. 2, lines 48-50; software instructions residing on a suitable memory medium for use in operating a computer based system; col. 10, lines 34-45).

12. As to claim 35, it is rejected for the same reasons set forth in claims 1 and 33 above. In addition, Huberman discloses a signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus (i.e., software program for execution on a computer based system; col. 2, lines 48-50; software instructions residing on a suitable memory medium for use in operating a computer based system; col. 10, lines 34-45).

13. As to claims 2 and 3, Huberman discloses estimating a direction in a navigation pattern of spatial data retrieval by said user (i.e., asymptotic pattern of activation over nodes will define the degree of predicted relevance of web pages; col. 1, line 66 – col. 2, line 8; col. 3, lines 24-29).

Art Unit: 2154

14. As to claim 4, Huberman discloses automatically downloading a most likely to be retrieval document to the user's browser (col. 3, line 60 – col. 4, line 4) before being requested by the user (i.e., browser to load; col. 4, lines 5-8).

15. As to claims 5 and 6, Huberman discloses utilizing an N-dimensional space indexing technique to construct an indexed database of documents which are to be retrieved by the user (fig. 5; i.e., indexing web pages; col. 7, line 59 – col. 8, line 17).

16. As to claims 7 and 8, Huberman discloses direction of trajectory based on user's traversals and traversals of other users (i.e., "law of surfing" provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47).

17. As to claims 9-11, Huberman discloses when a user retrieves first and second documents in sequence, the first document comprises an "origin" document of a movement (i.e., a source page on a web site; col. 1, line 51) and the second document comprises a "destination" document (i.e., relevant web page; col. 1, line 50), wherein one of a trail count record entry is created in a search record index of the origin document labeled with a unique resource identifier (i.e., URL; col. 3, lines 50-57) of the destination document, and a trail count record is incremented, if a trail count record already exists (col. 8, lines 3-17; i.e., number of "hits" a web page; col. 2, lines 9-11; col. 5, lines 40-47; col. 6, lines 42-45).

Art Unit: 2154

18. As to claims 12-17, Huberman further discloses computing which points are closest to the origin, using Euclidean distances (i.e., matrix, vector; col. 4, lines 41-47; each entry in the i column, j row of a matrix represents the strength of connection between page i and page j; col. 8, lines 3-17) and computing which documents are most likely to be traversed next based on a previous usage of other users, by consulting trail records of the index (col. 8, lines 44-63).

19. As to claims 18-23, Huberman discloses providing a predictive Web caching portal at a user side, to allow a Web Browser at said user (col. 3, line 60 – col. 4, line 4) to determine which documents are likely to be retrieved next by the user (i.e., most relevant is an indication that it has a high likelihood to be of interest to someone viewing the document.... identify “relevant” documents to one currently being viewed; col. 3, lines 20-29; the “law of surfing” provides a model of user traversal behavior in the document collection by indicating a probability that the user will traverse to a next document; col. 2, lines 44-47; indicates a probability that a user will access a document during the course of browsing the collection of linked documents; col. 2, lines 14-25; the “Recommend” feature provides a list of related web pages that a user may want to retrieve and view based on the web page that they are currently viewing; col. 1, lines 46-48), said documents being linked by hypertext links and a hypertext link tag being provided for links which contain a counter of a number of times that the user has traversed that link (i.e., ranked lists of documents; col. 1, lines 40-42; number of “hits” a web page; col. 2, lines 9-11; col. 5, lines 40-47; col. 6, lines 42-45).



***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Graham, patent 6,631,372, Stensmo, US 2002/0194158, Delano, patent 6,430,558, Takagi et al, patent 6,243,775, Pirolli et al, patent 6,272,507 discloses the list of web pages returned by a search engine is ranked by relevancy.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jungwon Chang whose telephone number is (703)305-9669. The examiner can normally be reached on 9:30-6:00 (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703)305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2154

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWC  
September 7, 2004

A handwritten signature in black ink, appearing to read "N. El-Hachy". The signature is written in a cursive style with a long, sweeping vertical stroke at the end.